

Consequently, if there is compliance with these conditions, applicant would be entitled to an exception under section 3(b)(3) of the Act except for the fact the outstanding long-term debt is and may continue to be owned by the Small Business Administration rather than by Laboratories.

Section 6(c) of the Act provides that the Commission, by order upon application, may conditionally or unconditionally exempt any person from any provisions of the Act, if and to the extent that such exemption is necessary or appropriate in the public interest and consistent with the protection of investors and the purpose fairly intended by the policy and provisions of the Act.

Applicant states that it is not in the public interest to regulate applicant under Act because all of the outstanding capital stock of applicant is owned by Laboratories, which is not an investment company, and the debentures are held by the U.S. Small Business Administration which is in a position to protect its investment in applicant under the provisions of the Small Business Investment Act of 1958.

Applicant has agreed, in the event the Commission grants the application, that the Commission's order may be issued subject to the following conditions:

1. Applicant shall—

(a) Not issue any securities (other than short-term paper as defined in sec. 2(a)(36) of the Act) except to (i) Wyle Laboratories or (ii) the U.S. Small Business Administration, unless this order is modified expressly by another order of this Commission to permit such transaction;

(b) File with the Commission, within 120 days after the close of each fiscal year of applicant, the data required by items 5, 6, 7 and 8 of the annual report on Form N-5R adopted by the Commission pursuant to section 30(a) of the Act;

(c) File with the Commission within 120 days after the close of each fiscal year of applicant and Wyle Laboratories (i) a balance sheet of each company showing assets in reasonable detail as of the close of such fiscal year, with a schedule showing such assets at value (taking securities for which market quotations are readily available at market value and taking other securities and assets at value as determined in good faith by the board of directors) and (ii) a statement of income for such fiscal year and a statement of paid-in surplus and retained earnings as of the close of such fiscal year for applicant and Wyle Laboratories. Applicant may incorporate by reference in any material filed to meet the requirements of this condition, any document or part thereof previously or concurrently filed with the Commission pursuant to any of the Acts administered by the Commission.

2. No person other than Wyle Laboratories or the U.S. Small Business Administration shall at any time own any outstanding security of applicant (other than short-term paper).

Notice is further given that any interested person may, not later than

February 14, 1967, at 5:30 p.m., submit to the Commission in writing a request for a hearing on the matter accompanied by a statement as to the nature of his interest, the reason for such request and the issues of fact or law proposed to be controverted, or he may request that he be notified if the Commission should order a hearing thereon. Any such communication should be addressed: Secretary, Securities and Exchange Commission, Washington, D.C. 20549. A copy of such request shall be served personally or by mail (airmail if the person being served is located more than 500 miles from the point of mailing) upon applicant. Proof of such service (by affidavit or in the case of an attorney at law by certificate) shall be filed contemporaneously with the request. At any time after said date, as provided by rule 0-5 of the rules and regulations promulgated under the Act, an order disposing of the application herein may be issued by the Commission upon the basis of the information stated in said application, unless an order for hearing upon said application shall be issued upon request or upon the Commission's own motion. Persons who request a hearing or advice as to whether a hearing is ordered will receive notice of further developments in this matter, including the date of the hearing (if ordered) and any postponements thereof.

It is ordered, That the Secretary of the Commission shall send a copy of this Notice by certified mail to the Deputy Administrator for Investments, Small Business Administration, Washington, D.C. 20416.

For the Commission (pursuant to delegated authority).

[SEAL]

ORVAL L. DUBOIS,
Secretary.

[F.R. Doc. 67-1273; Filed, Feb. 2, 1967;
8:48 a.m.]

INTERSTATE COMMERCE COMMISSION

FOURTH SECTION APPLICATIONS FOR RELIEF

JANUARY 31, 1967.

Protests to the granting of an application must be prepared in accordance with Rule 1.40 of the general rules of practice (49 CFR 1.40) and filed within 15 days from the date of publication of this notice in the FEDERAL REGISTER.

LONG-AND-SHORT HAUL

FSA No. 40878—Wrought iron or steel pipe from Minnequa, Colo. Filed by Southwestern Freight Bureau, agent (No. B-8946), for interested rail carriers. Rates on wrought iron or steel pipe, also oil country tubular goods, in carloads, as described in the application, from Minnequa, Colo., to Brownsville, Edinburg, Harlingen, Hebbronville, and McAllen, Tex.

Grounds for relief—Market competition.

Tariff—Supplement 58 to Southwestern Freight Bureau, agent, tariff ICC 4620.

FSA No. 40879—Sewer pipe—Illinois territory to Aurora, N.C. Filed by Illinois Freight Association, agent (No. 322), for interested rail carriers. Rates on sewer pipe and related articles, in carloads, from specified points in Illinois, to Aurora, N.C., and points grouped therewith.

Grounds for relief—Shortline distance formula and grouping.

Tariff—Supplement 18 to Illinois Freight Association, agent, tariff ICC 902.

FSA No. 40880—Lumber from and to points in southwestern territory. Filed by Southwestern Freight Bureau, agent (No. B-8950), for interested rail carriers. Rates on lumber and related articles, in carloads, between points in southwestern territory, on the one hand, and points in Virginia on the Virginia Central Railway, on the other.

Grounds for relief—Market competition.

Tariff—Supplement 26 to Southwestern Freight Bureau, agent, tariff ICC 4688.

FSA No. 40881—Commodity rates from and to Rio Grande City, Tex. Filed by Southwestern Freight Bureau, agent (No. B-8958), for interested rail carriers. Rates on property moving on import or export commodity rates, in carloads and less-than-carloads, between Rio Grande City, Tex. (on traffic imported from or exported to Mexico), on the one hand, and points in the United States and Canada, on the other.

Grounds for relief—Rate relationship. By the Commission.

[SEAL]

H. NEIL GARSON,
Secretary.

[F.R. Doc. 67-1284; Filed, Feb. 2, 1967;
8:48 a.m.]

EUGENE S. ROOT

Statement of Changes in Financial Interests

Pursuant to subsection 302(c), Part III, Executive Order 10647 (20 F.R. 8769) "Providing for the Appointment of Certain Persons under the Defense Production Act of 1950, as amended," I hereby furnish for filing with the Office of the Federal Register for publication in the FEDERAL REGISTER the following information showing any changes in my financial interests and business connections as heretofore reported and published (20 F.R. 10086; 21 F.R. 3475, 9198; 22 F.R. 3777, 9450; 23 F.R. 3798, 9501; 24 F.R. 4187, 9502; 25 F.R. 102; 26 F.R. 1693, 6405; 27 F.R. 648, 6409; 28 F.R. 197, 7060; 29 F.R. 1675, 981; 30 F.R. 1073; 30 F.R. 9342; 31 F.R. 592 and 9432) for the period from July 1, 1966, through December 31, 1966.

Nothing to report.

EUGENE S. ROOT.

JANUARY 11, 1967.

[F.R. Doc. 67-1285; Filed, Feb. 2, 1967;
8:49 a.m.]

SMALL BUSINESS ADMINISTRATION

[Delegation of Authority No. 5, Rev. 1
(Amdt. 1)]

ASSOCIATE ADMINISTRATOR FOR PROCUREMENT AND MANAGE- MENT ASSISTANCE

Delegation of Authority Regarding Procurement Assistance

Pursuant to the authority vested in the Administrator of the Small Business Administration by the Small Business Act, 72 Stat. 384, as amended; the Small Busi-

ness Investment Act of 1958, 72 Stat. 689, as amended; and Title IV of the Economic Opportunity Act of 1964, 78 Stat. 526, as amended, Delegation of Authority No. 5, Revision 1, 32 F.R. 178, paragraph III is hereby amended to read as follows:

III. All authorities delegated herein may be exercised by any employee of SBA designated as Acting Associate Administrator for Procurement and Management Assistance.

Effective date: September 1, 1966.

BERNARD L. BOUTIN,
Administrator.

[F.R. Doc. 67-1274; Filed, Feb. 2, 1967;
8:48 a.m.]

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FEDERAL REGISTER

VOLUME 32 • NUMBER 23

Friday, February 3, 1967 • Washington, D.C.

PART II

Department of Commerce

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Initial Federal Motor Vehicle Safety Standards



Title 23—HIGHWAYS AND VEHICLES

Chapter II—Vehicle and Highway Safety

[Docket No. 3]

PART 255—INITIAL FEDERAL MOTOR VEHICLE SAFETY STANDARDS

This order establishes Initial Federal Motor Vehicle Safety Standards for new motor vehicles and equipment. A notice of rule making proposing the Initial Standards was issued on November 30, 1966 (31 F.R. 15212, corrected 31 F.R. 15600). All pertinent matter in the written and oral comments received has been fully considered. Considerations of time prevent discussion of comments on individual standards.

The motor vehicle safety standards are rules as that term is defined in 5 U.S.C. sec. 551(4). The established practice is that the public record of a rule-making proceeding under 5 U.S.C. section 553 (former sec. 4 Administrative Procedure Act), involving a substantive rule and instituted upon an agency's own initiative, begins with the notice of rule making. An agency is under no legal duty to reveal the internal processes that shaped the project, and interested persons are not entitled to comment thereon, 5 U.S.C. section 553(b)(3). Where, as here, the addressees of a proposed rule are themselves actively engaged as experts on the subject matter, their understanding of the meaning and effect of a rule is certainly not impaired by the absence of such a disclosure. As a practical proposition, this Agency intends to adopt a policy of the greatest possible disclosure of underlying considerations in future substantive rule making when it will not operate under an unusually tight time schedule. In this instance, such disclosure was not possible, and administrative due process required no more than publication of the notice. The requirement that the standards be based on a record does not operate to require insertion in the record of matter not required as part of a rule-making notice.

The following findings are made with respect to all standards—

(1) Each standard is a minimum standard for motor vehicle or equipment performance which is practicable and meets the need for motor vehicle safety, and provides objective criteria;

(2) Each standard is reasonable, practicable, and appropriate for the particular class of motor vehicle or item of equipment for which it is prescribed;

(3) Each standard will contribute substantially to the purpose of reducing traffic accidents, and deaths and injuries to persons resulting therefrom, in the United States; and

(4) The matter incorporated by reference is reasonably available to the persons affected by this regulation.

In addition to the vehicle classes of passenger cars, motorcycles, trucks,

buses, and trailers proposed in the Notice, the Initial Standards as herein established introduce the new class of "multipurpose passenger vehicles." Only standards proposed in the Notice for vehicles now in this class are made applicable to this class. Each standard applies only to the class of vehicles to which it is made applicable by its terms.

The initial standards may be amended from time to time. Each standard remains in effect until rescinded or superseded by a Revised Standard actually becoming effective.

The requirements of Standard No. 209 were originally published on August 31, 1966 (31 F.R. 11528), as a revision to the existing seat belt standard that had been promulgated by the Secretary of Commerce under the authority of Public Law 88-201. At that time, it was provided that the revised standards would become mandatory after February 28, 1967, and would be an optional alternative to the existing standard until that date. As a result seat belt manufacturers had already taken steps to meet the March 1, 1967 date before the Notice for the Initial Federal Motor Vehicle Safety Standards was issued on December 3, 1966. To preserve the continuity of this change to the new seat belt standard, the March 1, 1967 effective date was included in the proposed Initial Federal Motor Vehicle Safety Standards. This places no certification requirement on the vehicle manufacturer, however, until the effective date of the first Standard applicable to a motor vehicle rather than motor vehicle equipment.

In consideration of the foregoing, Chapter II of Title 23 of the Code of Federal Regulations is amended by adding a new Subchapter C—Motor Vehicle Safety Regulations, effective January 1, 1968 except Motor Vehicle Safety Standard No. 209, "Seat Belt Assemblies—Passenger Cars, Multipurpose Passenger Vehicles, Trucks, and Buses," which becomes effective March 1, 1967, to read as set forth below.

This regulation was proposed as Part 245 but will, for reasons of organization of subject matter, be issued as Part 255.

This rule-making action is taken under the authority of sections 103 and 119 of the National Traffic and Motor Vehicle Safety Act of 1966 (15 U.S.C. sec. 1392, 1407) and the delegations of authority of October 20, 1966 (31 F.R. 13952) and January 24, 1967 (32 F.R. 1005).

Issued in Washington, D.C., on January 31, 1967.

LOWELL K. BRIDWELL,
Acting Under Secretary
of Commerce for Transportation.

Subpart A—General

Sec.	
255.1	Scope.
255.3	Definitions.
255.5	Matter incorporated by reference.
255.7	Applicability.
255.9	Separability.
255.11	Equivalent demonstration procedure.

Support B—Standards

Sec.

255.21 Federal Motor Vehicle Safety Standards.

AUTHORITY: The provisions of this Part 255 issued under 80 Stat. 718.

Subpart A—General

§ 255.1 Scope.

This part contains the initial Federal Motor Vehicle Safety Standards for motor vehicles and motor vehicle equipment established under section 103 of the National Traffic and Motor Vehicle Safety Act of 1966 (80 Stat. 718).

§ 255.3 Definitions.

(a) *Statutory definitions.* All terms defined in section 102 of the Act are used in their statutory meaning.

(b) *Other definitions.* As used in this part—

"Act" means the National Traffic and Motor Vehicle Safety Act of 1966 (80 Stat. 718).

"Approved," unless used with reference to another person, means approved by the Secretary.

"Bus" means a motor vehicle with motive power, except a trailer, designed for carrying more than 10 persons.

"Curb weight" means the weight of a motor vehicle with standard equipment; maximum capacity of engine fuel, oil, and coolant; and, if so equipped, air conditioning and additional weight optional engine.

"Driver" means the occupant of a motor vehicle seated immediately behind the steering control system.

"Emergency brake" means a mechanism designed to stop a motor vehicle after a failure of the service brake system.

"Forward control" means a configuration in which more than half of the engine length is rearward of the foremost point of the windshield base and the steering wheel hub is in the forward quarter of the vehicle length.

"H point" means the mechanically hinged hip point of a manikin which simulates the actual pivot center of the human torso and thigh, described in SAE Recommended Practice J826, "Manikins for Use in Defining Vehicle Seating Accommodations," November 1962.

"Head impact area" means all non-glazed surfaces of the interior of a vehicle that are within the limits of the locus of points contacted by the head established by—

(1) Placing a 95th percentile adult male manikin restrained by a Type 1 seat belt assembly with sufficient slack to allow a 5-inch forward movement of the manikin's "H" point in each designated seating position;

(2) Adjusting the seat occupied by the manikin to its most forward position and moving the head and torso of the manikin in all directions to the extent allowed by the seat belt; and

(3) Repeating this procedure with a 5th percentile adult female manikin with the seat adjusted to its rearmost position.

"Includes" means includes but is not limited to.

"Knee and leg impact area" means all nonglazed surfaces of the interior of a vehicle that are within the limits of the locus of points contacted by the knees and legs established by—

(1) Placing a 95th percentile adult male manikin restrained by a Type 1 seat belt assembly with sufficient slack to allow a 5-inch forward movement of the manikin's "H" point in each designated seating position;

(2) Adjusting the seat occupied by the manikin to its rearmost position and moving the knees and legs of the manikin in all directions to the extent allowed by the seat belt while keeping the manikin's feet on the floor and on the toe board; and

(3) Repeating this procedure with the seat adjusted to its most forward position.

"Motorcycle" means a motor vehicle with motive power having a seat or saddle for the use of the rider and designed to travel on not more than three wheels in contact with the ground.

"Motor-driven cycle" means a motorcycle with a motor that produces 5-horsepower or less.

"Multipurpose passenger vehicle" means a motor vehicle with motive power, except a trailer, designed to carry 10 persons or less which is constructed either on a truck chassis or with special features for occasional off-road operation.

"Occupant" means a person or manikin seated in the vehicle, and, unless otherwise specified in an individual standard, having the dimensions and weight of the 95th percentile adult male.

"Parking brake" means a mechanism designed to prevent the movement of a stationary motor vehicle.

"Passenger car" means a motor vehicle with motive power, except a multipurpose passenger vehicle, motorcycle, or trailer, designed for carrying 10 persons or less.

"Pelvic impact area" means that area of the side panel adjacent to the occupant below a horizontal plane 4.5 inches above the "H" point of the normally seated 95th percentile adult male manikin with the seat in the highest adjusted position.

"Pole trailer" means a motor vehicle without motive power designed to be drawn by another motor vehicle and attached to the towing vehicle by means of a reach or pole, or by being boomed or otherwise secured to the towing vehicle, for transporting long or irregularly shaped loads such as poles, pipes, or structural members capable generally of sustaining themselves as beams between the supporting connections.

"School bus" means a bus designed primarily to carry children to and from school, but not including buses operated by common carriers in urban transportation of school children.

"Semitrailer" means a trailer, except a pole trailer, so constructed that a substantial part of its weight rests upon or is carried by another motor vehicle.

"Service brake" means the primary mechanism designed to stop a motor vehicle.

"Torso line" means the line connecting the "H" point and the shoulder reference point as defined in SAE Recommended Practice J787g, "Motor Vehicle Seat Belt Anchorage," September 1966.

"Trailer" means a motor vehicle with or without motive power, designed for carrying persons or property and for being drawn by another motor vehicle.

"Trailer converter dolly" means a trailer chassis equipped with one or more axles, a lower half of a fifth wheel and a drawbar.

"Truck" means a motor vehicle with motive power, except a trailer, designed primarily for the transportation of property or special purpose equipment.

"Truck tractor" means a truck designed primarily for drawing other motor vehicles and not so constructed as to carry a load other than a part of the weight of the vehicle and the load so drawn.

"95th percentile adult male" means a person possessing the dimensions and weight of the 95th percentile adult male specified in Public Health Service Publication No. 1000, Series 11, No. 8, "Weight, Height, and Selected Body Dimensions of Adults."

§ 255.5 Matter incorporated by reference.

(a) *Incorporation.* There are hereby incorporated, by reference, into this part, all materials referred to in any standard in Subpart B of this part that are not set forth in full in the standard. These materials are thereby made part of this regulation. Materials subject to change are incorporated as they are in effect on the date of adoption of this part, unless the reference to them provides otherwise.

(b) *Availability.* The materials incorporated by reference, other than acts of Congress and matter published elsewhere in the FEDERAL REGISTER, are available as follows:

(1) *Standards of the Society of Automotive Engineers (SAE).* They are published by the Society of Automotive Engineers, Inc. Information and copies may be obtained by writing to: Society of Automotive Engineers, Inc., 485 Lexington Avenue, New York, N.Y. 10017.

(2) *Standards of the American Society for Testing and Materials.* They are published by the American Society for Testing and Materials. Information on copies may be obtained by writing to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pa. 19103.

(3) *Standards of the United States of America Standards Institute.* They are published by the United States of America Standards Institute. Information and copies may be obtained by writing the United States of America Standards Institute, 10 East 40th Street, New York, N.Y. 10016.

(4) *Data from the National Health Survey, Public Health Publication No. 1000, Series 11, No. 8.* This is published by the U.S. Department of Health, Education, and Welfare. Copies may be obtained for a price of 35 cents from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

All incorporated materials are available for inspection in the Docket Room 3807,

National Traffic Safety Agency, U.S. Department of Commerce, Washington, D.C. 20230.

§ 255.7 Applicability.

(a) *General.* Each standard set forth in Subpart B of this part applies according to its terms to new motorcycles and trailers regardless of weight and to all other new motor vehicles over 1,000 pounds curb weight, or items of motor vehicle equipment, the manufacture of which is completed after the effective date of the standard.

(b) *Military vehicles.* No standard applies to a vehicle or item of equipment manufactured for, and sold directly to, the Armed Forces of the United States in conformity with contractual specifications.

(c) *Export.* No standard applies to a vehicle or item of equipment in the circumstances provided in section 108(b)(5) of the Act (15 U.S.C. 1397(b)(5)).

§ 255.9 Separability.

If any standard established in this part or its application to any person or circumstance is held invalid, the remainder of the part and the application of that standard to other persons or circumstances is not affected thereby.

§ 255.11 Equivalent demonstration procedure.

An approved equivalent may be substituted for any required destructive demonstration procedure.

Subpart B—Standards

§ 255.21 Federal Motor Vehicle Safety Standards.

The Federal Motor Vehicle Safety Standards are set forth in this subpart.

Motor vehicle safety standard numbers and titles

- 101 Control Location and Identification—Passenger Cars
- 102 Transmission Shift Lever Sequence, Starter Interlock, and Transmission Braking Effect—Passenger Cars, Multipurpose Passenger Vehicles, Trucks, and Buses
- 103 Windshield Defrosting and Defogging—Passenger Cars and Multipurpose Passenger Vehicles
- 104 Windshield Wiping and Washing Systems—Passenger Cars
- 105 Hydraulic Service Brake, Emergency Brake, and Parking Brake Systems—Passenger Cars
- 106 Hydraulic Brake Hoses—Passenger Cars and Multipurpose Passenger Vehicles
- 107 Reflecting Surfaces—Passenger Cars, Multipurpose Passenger Vehicles, Trucks, and Buses
- 108 Lamps, Reflective Devices, and Associated Equipment—Multipurpose Passenger Vehicles, Trucks, Trailers, and Buses, 80 or More Inches Wide Overall
- 111 Rearview Mirrors—Passenger Cars and Multipurpose Passenger Vehicles
- 203 Impact Protection for the Driver From the Steering Control System—Passenger Cars
- 204 Steering Control Rearward Displacement—Passenger Cars
- 205 Glazing Materials—Passenger Cars, Multipurpose Passenger Vehicles, Motorcycles, Trucks, and Buses
- 206 Door Latches and Door Hinge Systems—Passenger Cars

- 207 Anchorage of Seats—Passenger Cars
- 208 Seat Belt Installations—Passenger Cars
- 209 Seat Belt Assemblies—Passenger Cars, Multipurpose Passenger Vehicles, Trucks, and Buses
- 210 Seat Belt Assembly Anchorages—Passenger Cars
- 211 Wheel Nuts, Wheel Discs, and Hub Caps—Passenger Cars and Multipurpose Passenger Vehicles
- 301 Fuel Tanks, Fuel Tank Filler Pipes, and Fuel Tank Connections—Passenger Cars

MOTOR VEHICLE SAFETY STANDARD No. 101
CONTROL LOCATION AND IDENTIFICATION—
PASSENGER CARS

S1. Purpose and scope. This standard specifies the requirements for location and identification of certain controls to facilitate their selection and ensure their accessibility.

S2. Application. This standard applies to passenger cars.

S3. Requirements.

S3.1 Location. Control of the following shall be provided within operational reach of a person seated at the controls, restrained by a Type 2 seat belt system with a reasonable degree of slack in the upper torso portion of the belt assembly—

- (a) Steering;
- (b) Horn;
- (c) Transmission, except transfer case;
- (d) Ignition;
- (e) Headlamps;
- (f) Turn signal;
- (g) Windshield wiping system;
- (h) Windshield washing system;
- (i) Choke (if manual); and,
- (j) Driver's sun visor.

S3.2 Identification. The following controls, when mounted on the instrument panel, shall be identified to permit recognition—

- (a) Headlamps;
- (b) Windshield wiping system;
- (c) Windshield washing system;
- (d) Windshield defrosting and defogging system; and,
- (e) Choke (if manual).

MOTOR VEHICLE SAFETY STANDARD
No. 102

TRANSMISSION SHIFT LEVER SEQUENCE, STARTER INTERLOCK, AND TRANSMISSION BRAKING EFFECT—PASSENGER CARS, MULTIPURPOSE PASSENGER VEHICLES, TRUCKS, AND BUSES

S1. Purpose and scope. This standard specifies the requirements for the transmission shift lever sequence, a starter interlock, and for a braking effect of automatic transmissions, to reduce the likelihood of shifting errors, starter engagement with vehicle in drive position, and to provide supplemental braking at speeds below 25 miles per hour.

S2. Application. This standard applies to passenger cars, multipurpose passenger vehicles, trucks, and buses.

S3. Requirements.

S3.1 Automatic transmissions.

S3.1.1 Location of transmission shift lever positions on passenger cars. A neutral position shall be located between forward drive and reverse drive positions.

If a steering-column-mounted transmission shift lever is used, movement from neutral position to forward drive position shall be clockwise. If the transmission shift lever sequence includes a park position, it shall be located at the end, adjacent to the reverse drive position.

S3.1.2 Transmission braking effect. In vehicles having more than one forward transmission gear ratio, one forward drive position shall provide a greater degree of engine braking than the highest speed transmission ratio at vehicle speeds below 25 miles per hour.

S3.1.3 Starter interlock. The engine starter shall be inoperative when the transmission shift lever is in a forward or reverse drive position.

S3.2 Automatic and manual transmissions. Identification of shift lever positions of automatic transmissions and of the shift lever pattern of manual transmissions, except three forward speed manual transmissions having the standard "H" pattern, shall be permanently displayed in view of the driver.

MOTOR VEHICLE SAFETY STANDARD
No. 103

WINDSHIELD DEFROSTING AND DEFOGGING—PASSENGER CARS AND MULTIPURPOSE PASSENGER VEHICLES

S1. Purpose and scope. This standard specifies requirements for providing vision through the windshield during frosting and fogging conditions.

S2. Application. This standard applies to passenger cars and multipurpose passenger vehicles manufactured for sale in the Continental United States.

S3. Requirement. A windshield defrosting and defogging system shall be provided.

MOTOR VEHICLE SAFETY STANDARD No. 104
WINDSHIELD WIPING AND WASHING SYSTEMS—PASSENGER CARS

S1. Purpose and scope. This standard specifies requirements for windshield wiping and washing systems.

S2. Application. This standard applies to passenger cars of 68 or more inches overall width.

S3. Definitions.

"Glazing surface reference line" means the line of intersection of the glazing surface and a horizontal plane 25 inches above the driver's "H" point as indicated on Figure 1 of SAE Recommended Practice J903a.

"Plan view reference line" means:

1. For bench type seats, a line outboard of the steering wheel centerline that is parallel to the vehicle centerline at a distance 0.15 times the difference between one-half of the shoulder room dimension indicated on Figure 2 of SAE Recommended Practice J903a and the distance from steering wheel centerline to car centerline.

2. For individual type seats, a line that is parallel to the vehicle centerline through the center of the seat.

S4. Requirements.

S4.1 Windshield wiping system.

S4.1.1 General characteristics. A power-driven windshield wiping system shall be provided that—

(a) Meets the performance requirements of S4.1.2; and,

(b) Provides two or more frequencies or speeds at least one of which exceeds 45 cycles per minute regardless of engine load.

S4.1.2 Wiped area. When tested wet in accordance with Society of Automotive Engineers Recommended Practice J903a, "Passenger Car Windshield Wiper Systems," May 1966, the windshield wiping system shall cleanly wipe the percentage specified in Column 2 of Table I of that area determined in accordance with S4.1.2.1 listed in Column 1 that is not within 1 inch of the edge of the glazed area.

S4.1.2.1 The glazing surface reference line and the plan view reference line shall be established with the driver's seat in the rearmost position. Areas A, B, and C shall be established using the angles specified in Table I applied as shown in Figures 1 and 2 of Society of Automotive Engineers Recommended Practice J903a, "Passenger Car Windshield Wiper Systems," May 1966.

TABLE I

Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6
Area	Minimum percent to be wiped	Angles in degrees			
		Left	Right	Up	Down
A.....	80	18	56	10	6
B.....	94	14	53	5	3
C.....	99	10	15	5	1

S4.2 Windshield washing system. A windshield washing system shall be provided that meets the requirements of SAE Recommended Practice J942, "Passenger Car Windshield Washer Systems," November 1965.

MOTOR VEHICLE SAFETY STANDARD No. 105
HYDRAULIC SERVICE BRAKE, EMERGENCY BRAKE, AND PARKING BRAKE SYSTEMS—PASSENGER CARS

S1. Purpose and scope. This standard specifies requirements for hydraulic service brake, emergency brake, and parking brake systems intended to ensure adequate braking performance under normal and emergency conditions.

S2. Application. This standard applies to passenger cars.

S3. Definitions. "Pressure component" means any internal component of the brake master cylinder or master control unit, wheel brake cylinder, brake line, brake hose, or equivalent, except vacuum assist components.

S4. Requirements.

S4.1 Service brake system. The performance ability of the fully operational service brake system for passenger cars shall be not less than that described in section D of Society of Automotive Engineers Recommended Practice J937, "Service Brake System Performance Requirements—Passenger Car," June 1966, and tested in accordance with SAE Recommended Practice J843a, "Brake System Road Test Code—Passenger Car," June 1966.

S4.2 Emergency-brake system. Rupture or leakage-type failure of any single pressure component of the service brake system, except structural failures of the brake master cylinder body or effectiveness indicator body, shall not result in complete loss of function of the vehicle brakes when force on the brake pedal is continued.

S4.2.1 Emergency brake system performance. If failure of a pressure component or insufficient hydraulic fluid in the system causes loss of pressure in any part of the brake system, the remaining portion of the brake system shall provide a stop of the vehicle loaded in accordance with SAE Recommended Practice J843a, June 1966, without pulling or swerving to the extent that would cause the vehicle to leave a level, 12-foot wide lane on a clean, dry, smooth, Portland cement concrete pavement (or other surface with equivalent coefficient of surface friction).

S4.2.2 Emergency brake system effectiveness indication. An electrically operated red light, mounted on the instrument panel in view of the driver, shall illuminate before or upon application of the brakes in the event of a hydraulic-type complete failure of a partial system. The indicator light shall have sufficient luminous intensity to be plainly visible in daylight and shall include a means for testing by the vehicle operator to ensure that the bulb is operable. No single failure in the internal components of the system effectiveness indicator, except the body of the device, shall permit the total loss of effectiveness of the braking system.

S4.3 Parking brake system. A parking brake system of a friction type with a solely mechanical means to retain engagement shall be provided that will hold the vehicle loaded in accordance with SAE Recommended Practice J843a, June 1966, to the limit of traction of the braked wheels in both forward and reverse directions on clean, dry, smooth, Portland cement concrete pavement (or other surface with equivalent coefficient of surface friction) of a 30 percent grade.

MOTOR VEHICLE SAFETY STANDARD No. 106
HYDRAULIC BRAKE HOSES—PASSENGER CARS AND MULTIPURPOSE PASSENGER VEHICLES

S1. Purpose and scope. This standard specifies requirements for hydraulic brake hoses that will reduce brake failures due to fluid leakage.

S2. Application. This standard applies to hydraulic brake hoses for use in passenger cars and multipurpose passenger vehicles.

S3. Requirements. Hydraulic brake hoses shall meet the requirements of Society of Automotive Engineers Standard J40b, "Automotive Brake Hoses," July 1966, except as follows:

- (a) Delete "Water Absorption Test."
- (b) Add "viscose" and "polyester" to acceptable braid materials.
- (c) Specify the following dates for referenced ASTM tests:

- (1) ASTM D 571—1955; and
 - (2) ASTM B 117—1964.
- (d) Revise "End Connections" paragraph to read: "Exposed steel or brass end connections of the hose assembly shall be protected against rust or corrosion."

MOTOR VEHICLE SAFETY STANDARD No. 107
REFLECTING SURFACES—PASSENGER CARS, MULTIPURPOSE PASSENGER VEHICLES, TRUCKS, AND BUSES

S1. Purpose and scope. This standard specifies reflecting surface requirements for certain vehicle components in the driver's field of view.

S2. Application. This standard applies to passenger cars, multipurpose passenger vehicles, trucks, and buses.

S3. Definitions.
"Field of view" means the area forward of a lateral vertical plane which is located tangent to the rearmost boundary of the SAE 99th percentile eye range contour of SAE Recommended Practice J941, November 1965. "Specular gloss" means the luminous fractional reflectance of a specimen at the specular direction.

S4. Requirements. The specular gloss of the surface of the materials used for the following bright metal components in the driver's field of view shall not exceed 40 units when measured by the 20° method of ASTM Standard D523-62T, June 1962—

- (a) Windshield wiper arms and blades;
- (b) Inside windshield mouldings;
- (c) Horn ring and hub of steering wheel assembly; and
- (d) Inside rearview mirror frame and mounting bracket.

MOTOR VEHICLE SAFETY STANDARD No. 108
LAMPS, REFLECTIVE DEVICES, AND ASSOCIATED EQUIPMENT—MULTIPURPOSE PASSENGER VEHICLES, TRUCKS, TRAILERS, AND BUSES, 80 OR MORE INCHES WIDE OVERALL

S1. Purpose and scope. This standard specifies requirements for lamps, reflective devices, and associated equipment, for signaling and to enable safe operation in darkness and other conditions of reduced visibility.

S2. Application. This standard applies to multipurpose passenger vehicles, trucks, trailers, and buses, that are 80 or more inches wide overall, except pole trailers and converter dollies.

S3. Requirements.

S3.1 Equipment.

S3.1.1 Except as provided in S3.1.1.1, S3.1.1.2, and S3.1.1.3, vehicles shall be equipped with lamps, reflective devices, and associated equipment, in the numbers of units and designed to conform to the standards specified in Table I.

S3.1.1.1 Truck tractors need not be equipped with turn signal lamps mounted on the rear if the turn signal lamps at or near the front are so constructed (double-faced) and so located that they are visible to overtaking passing drivers.

S3.1.1.2 Intermediate side marker lamps and intermediate reflex reflectors are required only on vehicles that are 30 or more feet long overall.

S3.1.1.3 Additional lamps, reflective devices, and associated equipment may be installed, provided they do not impair the effectiveness of the required equipment.

S3.2 Location of Lamps and Reflectors.

S3.2.1 Except as provided in S3.2.1.1, S3.2.1.2, and S3.2.1.3, lamps and reflective devices required by S3.1 shall be installed in accordance with Table II.

S3.2.1.1 On Tractor-trailer combination vehicles, the requirement that intermediate reflex reflectors and intermediate side marker lamps be located at or near the midpoint between the side reflex reflectors applies only to the trailer.

S3.2.1.2 On truck tractors, the red rear reflex reflectors may be mounted on the back of the cab.

S3.2.1.3 The visibility provision for backup lamps need not be complied with until January 1, 1969.

S3.3 Lamp Combinations and Equipment Combinations. Two or more lamps, reflective devices, and items of associated equipment may be combined if the requirements for each lamp, reflective device, and item of associated equipment are met, except that—

(a) No turn signal lamp may be combined optically with any lamp that produces a greater light intensity than the turn signal;

(b) No turn signal lamp may be combined optically with a stoplamp unless the stoplamp is extinguished when the turn signal is flashing; and

(c) No clearance lamp may be combined optically with any taillamp or identification lamp.

S3.4 Special Wiring Requirements.

S3.4.1 A means for switching between lower and upper headlamp beams shall be provided in accordance with SAE Recommended Practice J564a, "Headlamp Beam Switching," April 1964, or with SAE Recommended Practice J555a, "Semi-Automatic Headlamp Beam Switching Devices," April 1965.

S3.4.2 A means for indicating to the driver when the upper beams of the headlamps are on shall be provided in accordance with SAE Recommended Practice J564a, April 1964.

S3.4.3 Taillamps, license plate lamps, and side marker lamps shall be illuminated when the headlamps are illuminated.

S3.4.4 Except as provided in S3.4.4.1 through S3.4.4.3, stoplamps shall be actuated upon application of any service brakes.

S3.4.4.1 Actuation of stoplamps is not required upon actuation of the trailer emergency brakes by means of either manual or automatic control on the towing vehicle.

S3.4.4.2 Stoplamps on a towing vehicle need not be actuated when service brakes are applied to the towed vehicle or vehicles only.

S3.4.4.3 Stoplamps that are combined optically with turn signal lamps need not be operable when the combination is in use as a turn signal or as a vehicular hazard warning signal.

TABLE II—LOCATION OF EQUIPMENT—Continued

Item	Location on—			Height above road surface measured from center of item on unloaded vehicle
	Multipurpose passenger vehicles, trucks (other than truck tractors), and buses	Trailers	Truck tractors	
Taillamps	On the rear, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	On the rear, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	On the rear, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	Not less than 15 inches, nor more than 72 inches.
Stoplamps	On the rear, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	On the rear, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	On the rear, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	Not less than 15 inches, nor more than 72 inches.
License plate lamp	At rear license plate.	At rear license plate.	At rear license plate.	Not less than 15 inches, nor more than 72 inches.
Reflector lamps	2 red—on rear, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	2 red—on rear, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	2 red—on rear, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	Not less than 15 inches, nor more than 72 inches.
Side marker lamps	On each side, 1 red lamp as far to the rear as practicable and 1 amber lamp as far forward as practicable.	On each side, 1 red lamp as far to the rear as practicable and 1 amber lamp as far forward as practicable.	On each side, 1 red lamp as far to the rear as practicable and 1 amber lamp as far forward as practicable.	Not less than 15 inches.
Backup lamp	On rear, so that it is visible to pedestrians that are 6 feet or less in height from each position in the area to the rear of the vehicle, and from each position on either side of that rear area, that is 5 feet or less from the vehicle.	On rear, so that it is visible to pedestrians that are 6 feet or less in height from each position in the area to the rear of the vehicle, and from each position on either side of that rear area, that is 5 feet or less from the vehicle.	On rear, so that it is visible to pedestrians that are 6 feet or less in height from each position in the area to the rear of the vehicle, and from each position on either side of that rear area, that is 5 feet or less from the vehicle.	Not less than 15 inches.
Turn signal lamps	At or near the front: 1 amber on each side of the vertical centerline, at the same level, and as far apart as practicable. On rear: 1 red to amber on each side of the vertical centerline, at the same level, and as far apart as practicable.	On rear: 1 red to amber on each side of the vertical centerline, at the same level, and as far apart as practicable.	At or near the front: 1 amber on each side of the vertical centerline, at the same level, and as far apart as practicable. On rear: 1 red to amber on each side of the vertical centerline, at the same level, and as far apart as practicable.	Not less than 15 inches.

S3.4.5 The vehicular hazard warning signal operating unit shall operate independently of the ignition switch, and when energized, cause all turn signal lamps to flash simultaneously.

S3.4.6 After January 1, 1968, on all vehicles required to carry backup lamps by this standard, the backup lamp shall be illuminated when the ignition switch is energized and reverse gear is engaged, lamps, which shall flash.

TABLE I—EQUIPMENT

Item	Number and color in accordance with Society of Automotive Engineers Standard J584, April 1966, required on—			In accordance with SAE standard or recommended practice
	Multipurpose passenger vehicles, trucks (other than truck tractors), and buses	Trailers	Truck tractors	
Headlamps	2 white, 7-inch, Type 2 beam unit, Type 1 beam unit, and 1 white, 5 1/2-inch, Type 2 beam unit, Type 2 beam unit.	2 white, 7-inch, Type 2 beam unit, Type 1 beam unit, and 1 white, 5 1/2-inch, Type 2 beam unit, Type 2 beam unit.	Same as trucks and buses.	1950, June 1966, and 1970, August 1966.
Taillamps	2 red, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	2 red, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	2 red, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	1950, June 1966, and 1970, August 1966.
Stoplamps	2 red, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	2 red, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	2 red, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	1950, June 1966, and 1970, August 1966.
License plate lamp	1 white, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	1 white, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	1 white, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	1950, June 1966, and 1970, August 1966.
Reflector lamps	2 red, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	2 red, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	2 red, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	1950, June 1966, and 1970, August 1966.
Side marker lamps	2 red, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	2 red, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	2 red, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	1950, June 1966, and 1970, August 1966.
Backup lamp	1 white, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	1 white, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	1 white, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	1950, June 1966, and 1970, August 1966.
Turn signal lamps	2 red, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	2 red, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	2 red, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	1950, June 1966, and 1970, August 1966.
Turn-signal flasher	1 white, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	1 white, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	1 white, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	1950, June 1966, and 1970, August 1966.
Vehicular hazard warning signal operating unit	1 white, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	1 white, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	1 white, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	1950, June 1966, and 1970, August 1966.
Vehicular hazard warning signal	1 white, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	1 white, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	1 white, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	1950, June 1966, and 1970, August 1966.
Identification lamps	2 amber and 2 red, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	2 amber and 2 red, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	2 amber and 2 red, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	1950, June 1966, and 1970, August 1966.
Clearance lamps	2 amber and 2 red, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	2 amber and 2 red, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	2 amber and 2 red, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	1950, June 1966, and 1970, August 1966.
Intermediate side marker lamps	2 amber and 2 red, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	2 amber and 2 red, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	2 amber and 2 red, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	1950, June 1966, and 1970, August 1966.
Intermediate reflectors	2 amber and 2 red, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	2 amber and 2 red, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	2 amber and 2 red, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	1950, June 1966, and 1970, August 1966.

TABLE II—LOCATION OF EQUIPMENT

Item	Location on			Height above road surface measured from center of item on unloaded vehicle
	Multipurpose passenger vehicles, trucks (other than truck tractors), and buses	Trailers	Truck tractors	
Headlamps	Type 1 headlamps at the same height, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	Type 1 headlamps at the same height, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	Type 1 headlamps at the same height, 1 on each side of the vertical centerline, at the same level, and as far apart as practicable.	Not less than 24 inches, nor more than 72 inches.

TABLE II—LOCATION OF EQUIPMENT—Continued

Item	Location on			Height above road surface measured from center of item on unloaded vehicle
	Multipurpose passenger vehicles, trucks (other than truck tractors), and buses	Trailers	Truck tractors	
Identification lamps	On front and rear: 3 lamps, amber in front, red in rear, grouped in a horizontal row, with lamp centers spaced not less than 6 inches, nor more than 12 inches, apart and mounted as close as practicable to the vertical centerline.	On rear: 3 red lamps grouped in a horizontal row with lamp centers spaced not less than 6 inches nor more than 12 inches apart and mounted as close as practicable to the vertical centerline.	On front: 3 amber lamps grouped in a horizontal row with lamp centers spaced not less than 6 inches, nor more than 12 inches, apart and mounted as close as practicable to the vertical centerline.	On front only: No part of the lamps or mountings may extend below the top of the vehicle's windshield.
Clearance lamps	On front and rear: 1 lamp, amber in front, red in rear, as near as practicable to the upper left and right extreme edges of the vehicle. When the rear identification lights are mounted at the extreme height of the vehicle, rear clearance lamps may be mounted at optional heights.	On front and rear: 1 lamp, amber in front, red in rear, as near as practicable to the upper left and right extreme edges of the vehicle. When the rear identification lights are mounted at the extreme height of the vehicle, rear clearance lamps may be mounted at optional heights.	On front: 1 amber lamp as near as practicable to the upper left and right extreme edges of the vehicle.	
Intermediate side marker lamps	On each side: 1 amber lamp located at or near the midpoint between the forward and aft side marker lamps.	On each side: 1 amber lamp located at or near the midpoint between the forward and aft side marker lamps.		Not less than 15 inches.
Intermediate reflex reflectors	On each side: 1 located at or near the midpoint between the forward and aft side reflex reflectors.	On each side: 1 located at or near the midpoint between the forward and aft side reflex reflectors.		Not less than 15 inches, nor more than 60 inches.

**MOTOR VEHICLE SAFETY STANDARD NO. 111
REARVIEW MIRRORS—PASSENGER CARS AND
MULTIPURPOSE PASSENGER VEHICLES**

S1. Purpose and scope. This standard specifies requirements for rearview mirrors to provide the driver with a clear and reasonably unobstructed view to the rear.

S2. Application. This standard applies to passenger cars, multipurpose passenger vehicles, and passenger car and multipurpose passenger vehicle equipment.

S3. Requirements.

S3.1 Inside rearview mirrors.

S3.1.1 Field of view. A mirror shall be installed that provides the driver a view to the rear, of substantially unit magnification, with an included horizontal angle of at least 20 degrees and sufficient vertical angle to provide a view of a level road surface extending to the horizon beginning at a point not greater than 200 feet to the rear of the vehicle when the vehicle is occupied by the driver and four passengers or the designed occupant capacity, if less, based on 150 pound average occupant weight. The line of sight may be partially obscured by seated occupants or by head restraints.

S3.1.2 Mounting.

S3.1.2.1 The mirror mounting shall provide a stable support for the mirror, and shall provide for mirror adjustment by tilting in both horizontal and vertical directions.

S3.1.2.2 If the mirror is in the head impact area, the mounting shall break away without leaving sharp edges or deflect or collapse when the mirror is subjected to a force of 90 pounds in a forward or sideward direction in any plane 45° above or below the horizontal.

S3.2 Outside mirrors.

S3.2.1 Driver's side.

S3.2.1.1 Field of view. An outside mirror shall be installed that provides the driver a view, of substantially unit magnification, of a level road surface extending to the horizon from a line perpendicular to a plane tangent to the driver's side of the vehicle at the widest point and parallel to the longitudinal axis of the vehicle extending 8 feet out from the tangent plane 35 feet behind the driver's eyes, with the seat in the rearmost position. The line of sight may be partially obscured by rear body or fender contours.

S3.2.1.2 Mounting. The mounting shall provide a stable support for the mirror and neither the mirror nor the mounting shall protrude further than the widest part of the vehicle body, except to the extent necessary to meet the requirements of S3.2.1.1. The mirror shall not be obscured by the unwiped portion of the windshield, and shall be adjustable from the driver's seated position. The mirror and mounting shall be free of sharp points or edges that could contribute to pedestrian injury.

S3.2.2 Passenger's side. If the inside mirror required by S3.1 does not meet the

field of view requirements of S3.1.1, an outside mirror of substantially unit magnification shall be installed on the passenger's side.

S3.2.2.1 Mounting. The mounting shall provide a stable support for the mirror, and the mirror and mounting shall be free of sharp points or edges that could contribute to pedestrian injury.

S3.3 Mirror construction. The reflectance value of the reflective film employed shall be at least 35 percent. If a mirror is of the selective position prismatic type, the reflectance value in the night driving position shall be at least 4 percent.

S4. Demonstration procedures. Reflectance shall be determined in accordance with Society of Automotive Engineers Recommended Practice J964, "Test Procedure for Determining Reflectivity of Rearview Mirrors," June 1966.

**MOTOR VEHICLE SAFETY STANDARD NO. 201
OCCUPANT PROTECTION IN INTERIOR IMPACT—PASSENGER CARS**

S1. Purpose and scope. This standard specifies requirements for instrument panels, seat backs, protrusions (including knobs, switches, levers, handles, bezels, and panel contours), sun visors, and armrests to afford impact protection for occupants.

S2. Application. This standard applies to passenger cars.

S3. Requirements.

S3.1 Instrument panels. Except as provided in S3.1.1, when that area of the instrument panel that is within the head impact area or knee and leg impact area is impacted by a 15 pound, 6.5 inch diameter head form at a relative velocity of 15 miles per hour, the deceleration of the head form shall not exceed 80g for 1.0 millisecond.

S3.1.1 The requirements of S3.1 do not apply to areas—

(a) Less than 5 inches inboard from the juncture of the instrument panel attachment to the body side inner structure; or,

(b) Closer to the windshield juncture than those contactable by the head form with the windshield in place.

S3.1.2 Demonstration procedures. Tests shall be performed as described in Society of Automotive Engineers Recommended Practice J921, "Instrument Panel Laboratory Impact Test Procedure," June 1965, except that areas of contact within the knee and leg impact area shall be oriented to simulate the anticipated direction of contact.

S3.2 Seat backs. Except as provided in S3.2.1, when that area of the seat back that is within the head impact area or knee and leg impact area is impacted by a 15 pound, 6.5 inch diameter head form at a relative velocity of 15 miles per hour, the deceleration of the head form shall not exceed 80g for 1.0 millisecond or more.

S3.2.1 The requirements of S3.2 do not apply to areas of tops and backs of rear-most, side-facing, back-to-back, folding, and temporary seats.

S3.2.2 Demonstration procedures.

S3.2.2.1 Tests shall be performed as described in Society of Automotive Engineers Recommended Practice J921, "Instrument Panel Laboratory Impact Test Procedure," June 1965, except that areas of contact within the knee and leg impact area shall be substituted for the instrument panel and oriented to simulate the anticipated direction of contact.

S3.2.2.2 Adjustable forward seats shall be in the rearmost and lowest adjusted position that permits the accommodation of a 95th percentile male manikin in the rear seat. If the space available for sitting height or buttock-knee length in the rear seat is less than that required by the 95th percentile male manikin, the largest manikin that can be accommodated in the space available shall be used, and the forward seat adjusted back as far as space permits.

S3.2.2.3 Reclinable seat backs shall be in their full upright position.

S3.3 Protrusions. Protrusions in the head impact area and knee and leg impact area, including knobs, switches, levers, handles, bezels, and panel contours, shall conform to the following:

(a) Protrusions shall—

(1) Meet the performance requirements of S3.1;

(2) Be recessed in, or shielded by, a panel that meets the performance requirements of S3.1 and prevents contact with the protrusion by the head form during the demonstration procedure specified in S3.1.2;

(3) In the case of head impact area protrusions on the instrument panel, protrude not more than 0.375 inch during application of a load of 90 pounds in the direction of head impact, or, in the case of knee and leg impact area protrusions and head impact area protrusions not on the instrument panel, protrude not more than 1.0 inch during application of a load of 90 pounds in the direction of head, knee, or leg impact, with the protrusion in the most adverse normal position, and have an included area of not less than 1.0 square inch when sectioned perpendicular to the direction of impact not more than 0.125 inch from the first point of contact between the test manikin and the protrusion; or

(4) Detach upon application of a load of 90 pounds in the direction of head, knee, or leg impact, leaving no residual protrusion that does not meet the requirements of (1), (2), or (3).

(b) Edge radii shall not be less than 0.125 inch.

(c) Protrusion of bezels shall not exceed 0.375 inch.

(d) Transmission shift levers shall have an included area of not less than 1.0 square inch when sectioned perpendicular to the axis of the lever within 0.25 inch from the tip.

(e) For any protrusion consisting of energy-absorbing material over a rigid support, the measurements specified in (a) through (d) apply only to the rigid support.

S3.4 Sun visors.

S3.4.1 Two sun visors shall be provided that are constructed of, or covered with energy-absorbing material.

S3.4.2 Each sun visor mounting shall present no rigid material edge radii of less than 0.125 inch that is contactable by a spherical 6.5 inch diameter head form.

S3.5 Armrests.

S3.5.1 **General.** Each armrest, installed, shall conform to at least one of the following:

(a) It shall be constructed with energy-absorbing material that deflects or collapses laterally away from the occupant at least 2 inches without permitting contact with any underlying rigid material.

(b) It shall be constructed with energy-absorbing material that deflects or collapses to within 1.25 inches of a rigid test panel surface without permitting contact with any rigid material. Any rigid material between 0.5 and 1.25 inches from the panel surface shall have a minimum vertical height of not less than 1.00 inch. Upper and side edges of rigid material contactable by the occupant shall have radii of not less than 0.75 inch.

(c) In any adjusted position of the seat, with adjusted seat back angle not exceeding 28° from vertical, it shall provide not less than 2 inches of substantially vertical overlap of the pelvic impact area, and, as installed, the top and sides of the mounting bracket contactable by the occupant shall not have any edges of rigid material of less than 0.75 inch radius.

S3.5.2 Folding Armrests. Each armrest that folds into the seat shall either—

(a) Meet the requirements of S3.5.1; or

(b) Be constructed of or covered with energy-absorbing material.

**MOTOR VEHICLE SAFETY STANDARD
No. 203**

**IMPACT PROTECTION FOR THE DRIVER FROM
THE STEERING CONTROL SYSTEM—PASSENGER
CARS**

S1. Purpose and scope. This standard specifies requirements for steering control systems that will minimize chest, neck, and facial injuries to the driver as a result of impact.

S2. Application. This standard applies to passenger cars.

S3. Definitions. "Steering control system" means the basic steering mechanism and its associated trim hardware, including any portion of a steering column assembly that provides energy absorption upon impact.

S4. Requirements.

S4.1 Except as provided in S4.2, when the steering control system is impacted by a body block in accordance with Society of Automotive Engineers Recommended Practice J944, "Steering Wheel Assembly Laboratory Test Procedure," December 1965, or an approved equivalent, at a relative velocity of 15 miles per hour, the impact force developed on the chest of the body block transmitted to the steering control system shall not exceed 2,500 pounds.

S4.2 A Type 2 seat belt assembly that conforms to Motor Vehicle Safety Standard No. 209 shall be installed for the driver of any vehicle with forward control configuration that does not meet the requirements of S4.1.

S4.3 The steering control system shall be so constructed that no components or attachments, including horn actuating mechanisms and trim hardware, can catch the driver's clothing or jewelry during normal driving maneuvers.

**MOTOR VEHICLE SAFETY STANDARD
No. 204**

STEERING CONTROL REARWARD DISPLACEMENT—PASSENGER CARS

S1. Purpose and scope. This standard specifies requirements limiting the rearward displacement of the steering control into the passenger compartment to reduce the likelihood of chest, neck, or head injury.

S2. Application. This standard applies to passenger cars.

S3. Definitions.

"Steering column" means a structural housing that surrounds a steering shaft.

"Steering shaft" means a component that transmits steering torque from the steering wheel to the steering gear.

S4. Requirements.

S4.1 Except as provided in S4.2, the upper end of the steering column and shaft shall not be displaced horizontally rearward parallel to the longitudinal axis of the vehicle relative to an undisturbed point on the vehicle more than 5 inches, determined by dynamic measurement, in a barrier collision test at 30 miles per hour minimum conducted in accordance with Society of Automotive Engineers Recommended Practice J850, "Barrier Collision Tests," February 1963.

S4.2 A Type 2 seat belt assembly that conforms to Motor Vehicle Safety Standard No. 209 shall be installed for the driver of any vehicle with forward control configuration that does not meet the requirements of S4.1.

MOTOR VEHICLE SAFETY STANDARD No. 205

GLAZING MATERIALS—PASSENGER CARS, MULTIPURPOSE PASSENGER VEHICLES, MOTORCYCLES, TRUCKS, AND BUSES

S1. Purpose and scope. This standard specifies requirements for glazing materials to reduce lacerations to the face, scalp, and neck, and to minimize the possibility of occupants being thrown through the vehicle windows in collisions.

S2. Application. This standard applies to glazing materials for use in passenger cars, multipurpose passenger vehicles, motorcycles, trucks, and buses.

S3. Requirements.

S3.1 Materials. Glazing materials used in windshields, windows, and interior partitions shall conform to United States of America Standards Institute "American Standard Safety Code for Safety Glazing Materials for Glazing Motor Vehicles Operating on Land Highways," USA Standard Z26.1-1966, July 15, 1966.

S3.2 Edges. In vehicles, except school buses, exposed edges shall be treated in accordance with Society of Automotive Engineers Recommended Practice J673, "Automotive Glazing," June 1960. In school buses, exposed edges shall be banded.

MOTOR VEHICLE SAFETY STANDARD No. 206
DOOR LATCHES AND DOOR HINGE SYSTEMS—
PASSENGER CARS

S1. Purpose and scope. This standard specifies load requirements for door latches and door hinge systems to minimize the probability of occupants being thrown from the vehicle in a collision.

S2. Application. This standard applies to latches and door hinge systems for side doors used for occupant ingress or egress on passenger cars.

S3. Requirements.

S3.1 Door locks. Each door shall be equipped with a locking device with an operating means in the interior of the vehicle.

S3.2 Door hinges. Each door hinge system shall support the door and withstand an ultimate longitudinal load of 2,500 pounds and an ultimate transverse load of 2,000 pounds.

S3.3 Door latches.

S3.3.1 Longitudinal load. The door latch and striker assembly shall withstand a longitudinal load of 2,500 pounds in the fully latched position and 1,000 pounds in the secondary latched position.

S3.3.2 Transverse load. The door latch and striker assembly of hinged doors shall withstand a transverse load of 2,000 pounds in the fully latched position and 1,000 pounds in the secondary latched position.

S3.3.3 Inertia load. The door latch shall not move from the fully latched position when a longitudinal or transverse inertia load of 30g is applied to the door latch system (including the latch and its actuating mechanism).

S4. Demonstration procedures.

S4.1 Door hinges. Door hinges shall be tested in accordance with the Society of Automotive Engineers Recommended Practice J934, "Vehicle Passenger Door Hinge Systems," July 1965.

S4.2 Door latches. Door latches shall be tested in accordance with Society of Automotive Engineers Recommended Practice J839b, "Passenger Car Side Door Latch Systems," May 1965.

S4.3 Inertia load. Ability of the latch system to meet the requirements for inertia load shall be demonstrated by approved tests or in accordance with Section 5 of SAE Recommended Practice J839b, May 1965.

MOTOR VEHICLE SAFETY STANDARD No. 207
ANCHORAGE OF SEATS—PASSENGER CARS

S1. Purpose and scope. This standard establishes requirements for seats, their attachment assemblies, and their installation to minimize the possibility of failure by forces acting on the seat as a result of vehicle impact.

S2. Application. This standard applies to passenger cars.

S3. Requirements.

S3.1 General. Except for folding auxiliary jump seats and sidefacing seats, each occupant seat installation shall withstand the loads specified in S3.1.1, S3.1.2, and S3.1.3.

S3.1.1 The following loads shall be applied simultaneously—

(a) Twenty times the weight of the entire seat in a forward longitudinal direction; and

(b) If the seat belt assembly is directly attached to the seat, the total load imposed on the seat by simultaneous application of maximum loads required by Motor Vehicle Safety Standard No. 209 for all attached seat belt assemblies.

S3.1.2 A load equal to 20 times the weight of the entire seat shall be applied in a rearward longitudinal direction.

S3.1.3 A load equal to a 3,300 inch pound moment about the "H" point for each occupant position for which the seat is designed shall be applied to the upper cross member in a rearward longitudinal direction.

S3.2 The seat adjusters need not be operable after the application of the loads specified in S3.1.1, S3.1.2, and S3.1.3.

S3.3 Folding and hinged seats. A hinged or folding seat or seat back shall be equipped with a self-locking, restraining device and a control for releasing the restraining device.

S3.3.1 The release control shall be readily accessible to the occupant of that seat and to the occupant of any seat immediately behind that seat, and shall be constructed to preclude inertial release when loaded longitudinally to 20g.

S3.3.2 The restraining device shall not release or fail when a forward longitudinal load equal to 20 times the weight of the entire seat back is applied at the center of gravity of the seat back.

S4. Demonstration procedures.

S4.1 Dynamic or static testing techniques may be used.

S4.2 Static testing of seats shall be conducted in accordance with Society of Automotive Engineers Recommended Practice J879, "Passenger Car Front Seat and Seat Adjuster," November 1963, using the values specified in and the procedures applicable to this standard.

S4.3 Distributed loads may be replaced by concentrated loads at the loading centroid.

MOTOR VEHICLE SAFETY STANDARD No. 208
SEAT BELT INSTALLATIONS—PASSENGER CARS

S1. Purpose and scope. This standard establishes requirements for seat belt installations.

S2. Application. This standard applies to passenger cars.

S3. Requirements.

S3.1 Except as provided in S3.1.1 and S3.1.2, a Type 1 or Type 2 seat belt assembly that conforms to Motor Vehicle Safety Standard No. 209 shall be installed in each passenger car seat position.

S3.1.1 Except in convertibles a Type 2 seat belt assembly that conforms to Motor Vehicle Safety Standard No. 209 shall be installed in each outboard

passenger car seat position that includes the windshield header within the head impact area.

S3.1.2 The requirements of S3.1 do not apply to folding auxiliary jump seats, side-facing seats, and rearfacing seats.

MOTOR VEHICLE SAFETY STANDARD No. 209
SEAT BELT ASSEMBLIES—PASSENGER CARS,
MULTIPURPOSE PASSENGER VEHICLES,
TRUCKS, AND BUSES

S1. Purpose and scope. This standard specifies requirements for seat belt assemblies.

S2. Application. This standard applies to seat belt assemblies for use in passenger cars, multipurpose passenger vehicles, trucks, and buses.

S3. Requirements. Seat belt assemblies shall meet the requirements of Department of Commerce, National Bureau of Standards.

Standards for Seat Belts for Use in Motor Vehicles (15 CFR 9) (31 F.R. 11528).

This Standard supersedes Department of Commerce, National Bureau of Standards, *Standards for Seat Belts for Use in Motor Vehicles (15 CFR 9) (30 F.R. 8432).*

MOTOR VEHICLE SAFETY STANDARD No. 210
SEAT BELT ASSEMBLY ANCHORAGES—
PASSENGER CARS

S1. Purpose and scope. This standard specifies the requirements for seat belt assembly anchorages to ensure proper location for effective occupant restraint and reduce the likelihood of failure in collisions.

S2. Application. This standard applies to passenger cars.

S3. Definitions.

"Seat belt anchorage" means the provision for transferring seat belt assembly loads to the vehicle structure.

S4. Requirements.

S4.1 Type. Except as provided in S4.1.1 and S4.1.2, anchorages for a Type 1 or Type 2 seat belt assembly, as applicable, shall be provided for each designated seating position in accordance with Table I.

S4.1.1 Anchorages for either a Type 1 or Type 2 seat belt assembly shall be provided for each designated seating position in a convertible.

S4.1.2 Anchorages need not be provided for folding, auxiliary jump seats.

TABLE I

Seating position	Seat belt assembly required
Forward-facing seat	(Outboard..... Type 2. Inboard..... Type 1.
Rearward-facing seat	Outboard and Inboard..... Type 1.
Side-facing seat	Type 1.

S4.2 Strength.

S4.2.1 When tested in accordance with S5.1 or an equivalent dynamic test, no anchorage shall fail when a 5,000 pound load is applied to the body block.

S4.2.2 When tested in accordance with S5.2 or an equivalent dynamic test, no anchorage shall fail when a 3,000 pound load is applied to the pelvic body block together with a 3,000 pound load on the upper torso body block.

S4.2.3 Permanent deformation, including rupture or breakage, of any anchorage or surrounding area shall not constitute failure if the required load is attained.

S4.2.4 Except as provided in S4.2.5, belt assemblies having a common anchorage shall be tested simultaneously.

S4.2.5 Common anchorages for forward and rearward facing seating positions shall not be tested simultaneously.

S4.3 Location.

S4.3.1 Type 1 and pelvic portion of Type 2 seat belt assembly anchorages.

S4.3.1.1 For installations in which the belt passes around the outside of the seat, a line from the anchorage to the occupant's "H" point shall make an angle with the horizontal as near as practicable to 45 degrees with the seat at the midpoint of its adjustment range.

S4.3.1.2 For installations in which the belt passes through the springs or over the seat frame, the anchorage shall be aft of the rearmost position of the springs or seat bottom frame rear bar and the angle between the horizontal and the line of the belt from the occupant's "H" point with the belt snug, but not loaded, shall be as near as practicable to 45 degrees.

S4.3.1.3 Anchorages for an individual seat belt assembly shall be located, as near as practicable, 15 inches apart laterally.

S4.3.2 Type 2 upper torso seat belt assembly anchorages.

S4.3.2.1 With the seat in its rearmost position, and the seat back in its rearmost driving position, the anchorage for the upper end of the upper torso restraint shall be to the rear of the extension of the torso line of the two-dimensional manikin described in Society of Automotive Engineers Standard J826, "Manikins for Use in Defining Vehicle Seating Accommodation," November 1962. If the angle of the upper torso restraint passing from the shoulder of a seated 95th percentile adult male to the anchorage, or to a structure between the shoulder point and the anchorage is downward from the horizontal, it shall be not more than 40 degrees.

S5. Demonstration procedures.

S5.1 Seats with Type 1 or Type 2 seat belt anchorages. With the seat in its rearmost position, the load specified in S4.2.1 shall be applied at an angle of 5 degrees or more, but less than 15 degrees above the horizontal to an appropriate body block restrained by a Type 1 or pelvic portions of a Type 2 seat belt assembly, as applicable.

S5.2 Seats with Type 2 seat belt anchorages. With the seat in its rearmost position, the load specified in S4.2.2 shall be applied at an angle of 5 degrees or more but less than 15 degrees above the horizontal to an appropriate body block restrained by a Type 2 seat belt assembly.

MOTOR VEHICLE SAFETY STANDARD NO. 211

WHEEL NUTS, WHEEL DISCS, AND HUB CAPS—PASSENGER CARS AND MULTIPURPOSE PASSENGER VEHICLES

S1. Purpose and scope. This standard precludes the use of wheel nuts,

wheel discs, and hub caps that constitute a hazard to pedestrians and cyclists.

S2. Application. This standard applies to passenger cars, multipurpose passenger vehicles, and passenger car and multipurpose passenger vehicle equipment.

S3. Requirements. Wheel nuts, hub caps, and wheel discs for use on passenger cars and multipurpose passenger vehicles shall not incorporate winged projections.

MOTOR VEHICLE SAFETY STANDARD NO. 301

FUEL TANKS, FUEL TANK FILLER PIPES, AND FUEL TANK CONNECTIONS—PASSENGER CARS

S1. Purpose and scope. This standard specifies requirements for the integrity and security of fuel tanks, fuel tank filler pipes, and fuel tank connections to minimize fire hazard as a result of collision.

S2. Application. This standard applies to passenger cars.

S3. Requirements. When tested in accordance with S4:

(a) Fuel tank filler pipes, fuel tank connections to fuel lines, and fuel tanks filled to at least 90 percent of capacity with a liquid having substantially the same viscosity as, and specific gravity no less than, the fuel used in the vehicle, shall not discharge fluid at a rate greater than 1 ounce (by weight) per minute after termination of impact.

(b) Fluid losses during impact shall not exceed 1 ounce (by weight).

S4. Demonstration procedures. A front end longitudinal barrier collision test shall be conducted at a speed of at least 30 miles per hour in accordance with Society of Automotive Engineers Recommended Practice J850, "Barrier Collision Test," February 1963.

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